

Lane Regional Air Protection Agency
Standard Air Contaminant Discharge Permit

REVIEW REPORT

Eagle Veneer, Inc.
215 West 16th Avenue
Junction City, Oregon 97448
<http://www.eagleveneer.com>

Permit No. 200517

Permit Action

1. This is a permit renewal for an existing Air Contaminant Discharge Permit (ACDP) which was issued on July 13, 2010, and expired on July 12, 2015. The existing permit will remain valid until LRAPA issues the permit renewal. The facility operates a process listed in Table 1, Part B:57 – Veneer Drying and Table 1, Part C:3 – All sources electing to maintain the source’s baseline emission rate or netting basis and is, therefore, required to obtain an air contaminant discharge permit. The facility’s primary permitted activity is changed with this renewal from B:62 – Sawmill to B:57 – Veneer Drying to more accurately reflect the facility’s source category. Eagle Veneer, Inc. is requesting renewal of their permit.

Emission Units Description

2. The following table includes the emission units and control devices at the facility.

Emission Unit	Description	Pollution Control Device
EU-1	2-Veneer Dryers	2-Burley Scrubbers
EU-2	2-Boilers (Natural Gas)	NA
EU-3	Main Building: Hog Chip System, Scarfer, Strip Saw	2-Cyclones connected to 1-Baghouse

Attainment Status

3. This facility is located in an attainment area for all pollutants.

General Background Information

4. Eagle Veneer Inc., operates a veneer-drying facility in Junction City, Oregon. The facility processes approximately 140 million square feet per year of veneer on a 3/8” basis. The operation consists of two (2) gas-fired and steam-heated veneer dryers with emissions controlled by two (2) Burley Scrubbers. The facility also uses one (1) natural gas-fired boiler to provide steam for the veneer dryer and one (1) natural gas-fired boiler as a backup. Veneer is dried with 50% heat from the boiler and 50% heat from the direct-fired burners in the veneer dryers. The facility also uses two (2) cyclones and one (1) baghouse to control particulate matter (PM) emissions from the hog chip system, scarfer, and strip saw. The two cyclones are capped and vented to the baghouse. The operating schedule for the facility is 8,760 hours per year (24 hours per day, 7 days per week, and 52 weeks per year).

Compliance

5. The facility was inspected on April 6, 2010 and found to be in compliance with permit conditions.

- 6. During the prior permit period there were no complaints received about the facility.
- 7. Enforcement History:
 - 7.a. Currently there are no enforcement actions against the facility.
 - 7.b. January 24, 1999: The facility received a Notice of Non-Compliance No. 99-1182 (NON 99-1182), for exceeding the hours of operation for the cyclones as allowed by the facility's permit.
 - 7.c. August 30, 1993: The facility received an NON 93-9797 for exceeding the opacity limit as allowed by the facility's permit and for failing to install an emissions control system capable of complying with the opacity requirements.

Emissions

- 8. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr) ¹	Netting Basis		Plant Site Emission Limit (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	Unassigned Emissions ²
PM	95	95	78	53	53	25
PM ₁₀	89	89	68	53	53	15
PM _{2.5}	NA	NA	19	NA	15	5
CO	59	59	NA	99	99	0
NO _x	3	3	39	39	39	0
SO ₂	1	NA	NA	NA	NA	0
VOC	10	10	39	39	39	0
GHG	14,079	NA	14,079	NA	74,000	0

¹ The Baseline Emission Rate for the veneer dryers were based on information from 1978 production of 120,000,000 square feet (3/8" basis) per year. The boiler baseline emissions rate was based on an 18,000 tons per year of hog fuel.

² The unassigned emission were updated with this renewal to reflect their expiration in July 1, 2010 in accordance with LRAPA 42-0045. Upon expiration the unassigned emission were reduced to no more than the SER for each pollutant in LRAPA 12, Table 2.

- 8.a. The baseline emission rates for PM, PM₁₀, CO, NO_x, SO₂ and VOC were determined in previous permitting actions and there has been no changes.
- 8.b. In accordance with LRAPA 42-0040 the PSELs for CO, NO_x, SO₂, VOC, and GHG are set at the Generic PSEL limits. In accordance with LRAPA 42-0041 the PM, PM₁₀, PM_{2.5} PSELs are set at a source specific annual level.
- 8.c. A baseline emission rate is not required for PM_{2.5} in accordance with the definition of "baseline emission rate" in LRAPA Title 12. The PM_{2.5} netting basis is established with this permitting action as 28% of the PM₁₀ PSEL.

8.d. The baseline for GHGs is based upon actual emissions from 2005 calendar year.

Hazardous Air Pollutants:

9. The projected HAP emission from the facility are shown in the table below:

HAP	Amount (tons/year)
Acrolein	0.94
Formaldehyde	3.61
Acetaldehyde	1.26
Benzene	0.11
Propylene	0.08
Methanol	5.92
Toluene	0.30
Ethyl Benzene	0.001
Hexane	0.001
Phenol	1.86
Propionaldehyde	0.50
Xylenes	0.11
Total HAPs	14.69

Other Regulatory Considerations

10. The particulate emissions from the facility point stacks are required to not equal or exceed 20% opacity as a six (6) minute block average. The permit contains the applicable particulate matter limitations in terms of the grain loading standards in accordance with the rules adopted by DEQ on April 15, 2015.

PSEL Compliance Demonstration

11. In order to ensure that the 12-month rolling PSELs are not exceeded, the facility is required to perform emission calculations by the 15th day of each month and submit annual reports by March 15th of each year to LRAPA. For GHGs, compliance with the PSEL is determined by complying with the Oregon GHG reporting program requirements specified in division 215 (as applicable).

12. In lieu of monthly calculations, the facility is allowed to keep records demonstrating that none of the following operational parameters are exceeded on a rolling annual basis. The total veneer dryer throughput shall not exceed 185,000,000 ft² (on a 3/8" basis) per calendar 12-month rolling period

13. The facility shall keep records demonstrating that the two boilers and two (2) veneer dryers combined have not exceeded the limitation of 350,316,356 cubic feet of natural gas per calendar 12-month rolling period.

Typically Achievable Control Technology (TACT)

14. LRAPA Title 32-008 requires an existing emission unit at a facility to meet TACT if the emissions unit has emissions of criteria pollutants greater than ten (10) tons per year of any gaseous pollutant or five (5) tons per year of particulate, and the emissions unit is not subject to the emissions

standards under LRAPA Title 30, Title 32, Title 33, Title 38, Title 39, or Title 46 for the pollutants emitted, and the facility is required to have a permit. The veneer dryers are subject to standards in Title 33 and, therefore not required to meet TACT. Good combustion practices of the boiler(s) by the facility are considered TACT by LRAPA.

Criteria Pollutants

15. A major source is a facility that has the potential to emit more than 100 tons per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions.

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

16. Because the proposed PSELs for all regulated pollutants are below the Significant Emission Rates (SERs) in LRAPA Title 12, the facility is not subject to LRAPA's PSD requirements for PM₁₀, PM_{2.5}, SO_x, NO_x, CO, and VOC in LRAPA Title 38.

New Source Performance Standards (NSPS)

17. The boiler at the facility operates between 10 MMBtu/hr and 100 MMBtu/hr (14.7 MMBtu/hr), and it was constructed after June 9, 1989, the boiler is subject to 40 CFR 60, Subpart Dc; New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units, including, but not limited to, record keeping of fuel usage and annual reporting.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

18. This facility is a minor source of HAPs. There are no area source NESHAPs that are applicable to this facility.

Source Testing

19. The facility's veneer dryers were tested in November 2000 for PM and VOC. The facility is required to test one wet scrubber (Burley) to verify PM and VOC emission factors.
20. The facility tested veneer dryers in March 2005 to evaluate HAPs emission factors.

Continuous Compliance

21. Each Burley Scrubber, including the spray nozzles, are required to be inspected daily.
22. A record of the following data is required to be maintained for a period of at least five (5) years at the facility. [LRAPA 35-0160 and 42-0080]

<u>Parameter</u>	<u>Minimum Recording Frequency</u>
(a) Total Veneer Production by Species (sq. ft., 3/8" basis)	Monthly
(b) Each Truck Bin Cyclone throughput (lb or BDTs)	Monthly
(c) Total amount of natural gas combusted by each boiler	Monthly

<u>Parameter</u>	<u>Minimum Recording Frequency</u>
(d) Visual inspection of cyclones	Weekly
(e) Visual inspection of baghouse and scrubbers	Weekly
(f) Pressure drop reading on baghouse gauges	Weekly
(g) Inspect dryer and scrubber (including maintenance of scrubber)	As performed

Reporting

23. By March 15th each year, the facility is required to submit an annual report to include the information required by Permit Condition 22.
24. The facility is also required to submit an annual GHG report, as applicable, in accordance with OAR 340 division 215.

Public Notice

25. The draft permit was on public notice from October 15, 2015 to November 18, 2015. No written comments were submitted during the 30-day comment period

BD/cmw
11/18/2015

Emission Factors and PSEL Calculations

Eagle Veneer, Inc.				
Permit No. 200517				
Boiler Emissions				
Babcock Wilcox 19.9 MMBtu/hr Natural Gas Boiler				
Pollutant	Max Design Capacity (cubic ft/hr)	Emission Factors (lb/10⁶ ft³)	Conversion Factor (tons/lb)	Annual Emissions (tons)
PM/PM10/PM2.5	19,900	2.5	0.0005	0.22
SO2	19,900	1.7	0.0005	0.15
NOx	19,900	100	0.0005	8.72
CO	19,900	84	0.0005	7.32
VOC	19,900	5.5	0.0005	0.48
*Boiler operates 8,760 hours per year				
*Boiler operates at a maximum rate of 19.9 MMBtu/hr				
*Boiler operates at a maximum rate of 19,900 cubic feet per hour (1 cubic foot of natural gas = 1,000 BTU)				
*Gaseous emission factors were obtained from ODEQ Emission Factors for Gas-Fired Boilers				
*Annual Emissions (in tons) = Maximum gas usage x emission factor x 1 ton/2000 lbs x 8760 hours per year x 1/10 ⁶				
*Backup Fuel is propane. All emission factors for propane are less than for natural gas				
*Compliance with the PSELs is assured sine the higher factors for natural gas were used				

Clever Brooks 33.5 MMBtu/hr Natural Gas Boiler (installed 4/04)						
Pollutant	Max Design Capacity (cubic ft/hr)	Emission Factors		Conversion Factor (tons/lb)	Annual Emissions (tons)	Hourly Emissions (lb)
		Factors	Units			
PM/PM10/PM2.5	33.5	0.01	lb/MMbtu	0.0005	1.47	0.00
SO2	33.5	0.001	lb/MMbtu	0.0005	0.15	0.00
NOx	33,475	100	(lb/10 ⁶ ft ³)	0.0005	14.66	3.35
CO	33,475	84	(lb/10 ⁶ ft ³)	0.0005	12.32	2.81
VOC	33.5	0.016	lb/MMbtu	0.0005	2.35	0.00
*Boiler operates 8,760 hours per year						
*Boiler operates at a maximum rate of 33.5 MMBtu/hr						
*Boiler operates at a maximum rate of 33,475 cubic feet per hour (1 cubic foot of natural gas = 1,000 BTU)						
*Gaseous emission factors were obtained from AP-42 table 1.4-2 (3/98) Emission Factors for Gas-Fired Boilers						
*Annual Emissions (in tons) = Maximum gas usage x emission factor x 1 ton/2000 lbs x 8760 hours per year x 1/10 ⁶						
*Hourly Emission (pounds) = Max gas usage x emission factor						
*Emission Factors for the Clever Brooks Boiler are based on AP-42 and 5/15 Renewal Application						

Veneer Dryers

Eagle Veneer, Inc.				
Permit No. 200517				
Veneer Dryer Emissions				
Pollutant	Throughput (square ft, 3/8" basis) ¹	Emission Factor (lb/1000 sq ft) ²	Annual Emissions (tons)	
PM/PM10	185,000,000	0.56	51.8	
PM2.5	185,000,000	0.14	13.0	
SO2	185,000,000	NA	NA	
NOx	185,000,000	0.12	11.1	
CO	185,000,000	0.02	1.9	
VOC (heated)	185,000,000	0.21	19.4	Test Result 11/00
VOC (cooling zones)	185,000,000	0.08	7.4	
VOC (fugitives)	185,000,000	0.06	5.6	
Combined HAPs [#]	185,000,000	0.2323	21.5	
Single HAP (acetaldehyde) ^{###}	185,000,000	0.0136	1.3	
1. Throughput is the annual allowable limit requested by the facility and is specified in the permit.				
2. Emission Factors are based on DEQ Wood Product Emission Factors (8/11) for Veneer Dryer using highest factor for steam or gas heat. VOC (heated/cooling zones) based on test results (11/00).				
Burley Scrubbers are assumed to be 45% efficient				
DEQ Guidance for Veneer Dryers PM10 is 100% of PM and PM2.5 is 25% of PM10 (AQ-EF03)				
Annual Emissions = throughput x emission factor				
Emissions are from two veneer dryers combined				
50% of the heat to the dryers is provided by the boiler and 50% from direct-fired burners in the veneer dryers				
[#] Emission Factor is based on AQGP-010 Sawmill General Emission Factors Item 6 Tables: Veneer Dryers Worst-case emissions of all HAPs from Veneer Dryer, Cooling Section and Fugitives				
^{###} Emission Factor is based on 5/15 Renewal Application: Gas/Steam Combo (0.0046) + Cooling Section (0.004) + Fugitives (0.005)				

Cyclones and Baghouse

Cyclones with Baghouse						
Source	Annual Hourly Throughput (pounds)	Annual Throughput (BDT)	Emission Factor (lb/ton)	PM/PM10 Hourly Emissions (lb/hr)	PM/PM10 Annual Emissions (tons)	PM2.5 Annual Emissions (tons)
Truck Bin Cyclone # 1 w/baghouse	700	3,070	0.001	0.0004	0.001535	0.0015
Truck Bin Cyclone # 2 w/ baghouse	400	1,750	0.001	0.0002	0.000875	0.0009
Total				0.0006	0.0024	0.0024
Throughputs are based on the Facility's ACDP application dated 5/14/15						
The facility is in operation 8,760 hours per year						
Emission factors assume the baghouse has an efficiency of 99%						
PM2.5 emission are based on DEQ Emission Factors Wood Products - PM10/PM2.5 Fraction (08/01/11) and assumed to be 99% of PM10						
Hourly emission are based on maximum hourly throughput x emission factor x 1 ton/2000 pounds						
Annual emission are based on maximum annual throughput x emission factor x 1 ton/2000 pounds						